



Hussein Marah

Researcher — Computer Scientist



Profile

I'm an ambitious and highly motivated researcher and computer scientist. My interests include modelling, designing, and developing intelligent and complex systems. My fondness for technology led me to this path. However, as a mature person, my prime motivation is leveraging the knowledge and experience I gained through the years to turn technology into useful tools and positively impact society.



Work experience

Present
↑
Oct. 2021

Computer Science Researcher

University of Antwerp - Flanders Make, Belgium

- Research and design autonomous and intelligent systems.
- Lead the implementation of concepts into functional systems.
- Evaluate the results and the artefacts with real-world cases.
- Documentation, reporting and writing papers.
- Teaching assistant and supervision of postgraduate students.

Sep. 2021
↑
Nov. 2020

Computer Science Researcher

Johannes Kepler University Linz, Austria

- Investigated the modelling and engineering of real-time systems.
- Designed and developed software for pattern recognition and anomaly detection.



Education

present
↑
Oct. 2021

PhD in Computer Science

University of Antwerp, Belgium

Courses and Achievements:

- Conducted original research on intelligent and complex cyber-physical systems.
- Mastered several advanced techniques for modelling, simulation and engineering intelligent and complex systems.
- Trained extensively to realize concepts into implementations.
- Gained a wide range and valuable set of transferable skills.
- Presented research outcomes, product demos and showcases to academic peers and industry stakeholders.
- Authored and co-authored peer-reviewed papers presented at national and international conferences and various events.

Jul. 2020
↑
Sep. 2017

M.Sc. in Information Technology

Ege University, Turkey

Courses and Achievements:

- Completed multiple advanced computer science courses.
- Implemented a modelling, reverse engineering and code generation framework for IoT and wireless sensor networks.
- Successfully defended the thesis, published the results in a recognized journal and received the second-best paper award.



Contact



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Honors & Awards

Flanders Make

- Exploratory Research Grant 2021

Journal of Computer

- Languages 2021
Best Paper Award Runner-Up

Türkiye Scholarships

- Master Degree Scholarship 2016

Libyan Innovation Prize

- Finalist Nominations 2014

Almadar Aljadid Company

- Industrial Research Fund 2013



Languages

- Arabic Native
- English Advanced
- Dutch Basic
- Turkish Intermediate



Projects

- 2021 ● **Modelling and Engineering Intelligent Digital Twins.**
Continuing the research on the modelling and engineering of intelligent cognitive agent-based digital twins.
- 2020 ● **Runtime monitoring for Cyber-physical Systems.**
Conducted research to design and develop a runtime monitoring framework for cyber-physical systems and robotics.
- 2018 ● **Model-driven development for Embedded Systems and IoT Sensors.**
Developed a framework for roundtrip engineering for modelling and code generation of embedded systems of wireless sensor networks.
- 2013 ● **Fraud detection in Almadar Aljadid Company for telecommunication.**
Investigated fraud problems in international calls through the company's network. Conducted research, then designed and developed a software solution that has been tested using real datasets provided by the company.



Extracurricular

Summer Schools:

- KBC Winter School 13-14 December 2023, Brussels, Belgium.
- Summer School on Cyber-Physical Systems and Internet of Things (SS-CPSIoT), 06-10 June 2022, Budva, Montenegro.
- 8th International Summer School on Industrial Agents (ISSIA) 11-15 July 2022, Helmut Schmidt University, Hamburg, Germany.

Academic Activities:

- Member of the IEEE-IES Technical Committee on Industrial Agents (TC-IA).
- Reviewer in several high-impact journals: Simulation Modelling Practice and Theory (Elsevier) - 2023, IEEE Transactions on Industrial Informatics Journal - 2023, Journal of Computer Languages (Elsevier) - 2022, International Journal on Artificial Intelligence Tools - 2019.
- Organizing Staff member of the 3rd International Students Science Congress 2018, Izmir, Turkey.

Conferences & Workshops:

- 2023 ACM/IEEE International Conference on Model Driven Engineering Languages and Systems Companion, 01-06 October 2023, Västerås, Sweden.
- 10th International Workshop on Engineering Multi-Agent Systems 9-10 May 2022, Auckland, New Zealand.

Talks and Presentations:

- Tutorial, Flanders Make Scientific Conference, Kortrijk, 26 March Belgium, 2024.
- Showcase Demo, Flanders Make Robotics Demo Day, Leuven, Belgium, 14 September 2023.
- Invited Talk, Ege University, International Computer Institute, Izmir, 01 June 2023.
- Tutorial, Flanders Make Scientific Conference, Antwerp, Belgium, 29 March 2023.

Informal Learning and International Experiences:

- Digital Camps in Germany 2015 & 2016.
- Erasmus and youth exchanges in Latvia 2019, Slovenia 2021, Czech Republic 2021, Spain 2023.



Personal-Skills

- Critical Thinking
- Teamwork
- Collaboration
- Problem-Solving
- Flexible and Adaptable
- Effective Communication



Professional-Skills

- System Development and Engineering
- Programming Languages
- Modelling and Simulation
- Data Science
- AI & Machine Learning
- Robotics and IoT



Hobbies

- Running
- Hiking & Nature
- Swimming and Spearfishing